

REMARKS

The Examiner rejected Claims 2-4 and 12 under 35 U.S.C., 112, second paragraph. In particular, the Examiner objected to the use of "first" as a label for the cavity and wavelength since a second cavity and wavelength is not recited in the claims dependent from Claims 2 and 12. With respect to Claim 2 and "first wavelength", Applicant wishes to point out that Claims 7, 8 and 9 are dependent from Claim 2 via Claim 3. These claims define and utilize a second wavelength. With respect to the remaining issues, the above amendments remove the offending label.

The Examiner has made the current rejections final. Applicant submits that such a final rejection is not proper since the Examiner has put forth new grounds for rejection with respect to Claim 2 that were not necessitated by any amendment made by Applicant in the previous response. The amendment to Claim 2 made in the previous response merely placed that claim in independent form. In the previous office action, the Examiner rejected Claim 2 under 35 U.S.C. 103(a) as being unpatentable over Clayton, in view of Lading, *et al*. In the present office action, the Examiner now rejects Claim 2 under the prior art shown in Figure 1 of the present application in view of Clayton. Accordingly, a final rejection is not proper.

The Examiner rejected Claims 2-4 and 10-12 under 35 U.S.C. 103(a) as being unpatentable over the admitted prior in this application in view of Clayton, *et al* (hereafter "Clayton") (US 2003/0039024). Applicant traverses this rejection.

With respect to Claim 2, the Examiner maintains that the prior art shown in the present application teaches a polarization filter between the top and bottom mirrors that form the optical cavity. The Examiner specifically points to element 104 shown in Figure 1 of the present application. Applicant must disagree with the Examiner's reading of the present application. Element 104 is clearly defined to be a dielectric mirror not a polarization filter. Accordingly Applicant submits that the Examiner has not made a *prima facie* case for obviousness with respect to Claim 2 or the claims dependent therefrom.

With reference to Claim 10, the claim requires that the pumping laser be electrically connected to the bottom mirror of the first optical cavity. The Examiner has not pointed to any teaching in Clayon of such a limitation. Accordingly, Applicant submits that the

Examiner has not made a *prima facia* case for obviousness with reference to Claim 10 or the claims dependent therefrom.

Claim 11 requires that the top mirror of the pumping laser be located at the end of the optical fiber. The Examiner has not pointed to any teaching of such a pumping laser arrangement. Accordingly, there are additional grounds for allowing Claim 11.

With reference to Claim 12, the Examiner admits that Clayton does not teach the contact required in the claim. The Examiner attempts to overcome this problem by stating that it would be obvious to add such a contact, since a semiconductor laser requires such a contact.

With respect to Claim 12, the Examiner stated that the prior art and Clayton disclose all limitations of the claim except for the top contact. The Examiner maintains that it would have been obvious to one having ordinary skill in the art at the time the invention was made to include the contact since it was known in the art that a semiconductor laser cannot be operable without the contact. Applicant must disagree. The prior art referenced by the Examiner shows an optically pumped laser. Clayton teaches an optically pumped laser with one mirror in the optical fiber. Claim 12 requires an electrically pumped laser with one mirror in the optical fiber. Hence, the combined art cited by the Examiner does not teach all of the limitations of Claim 12. Accordingly, Applicant submits that the Examiner has not made a *prima facia* case for obviousness with respect to Claim 12.

The Examiner rejected Claims 5-9 under 35 U.S.C. 103(a) as being unpatentable over the admitted art in this application in view of Clayton, and further in view of Boucart, *et al* (hereafter "Boucart") (US 6,535,541). Applicant traverses this rejection. Applicant repeats the arguments made above with reference to the missing teachings in the rejection of Claim 3 from which Claims 7-9 depend. Boucart does not provide the missing teaching.

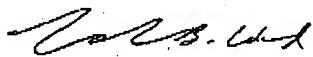
In making this rejection, the Examiner stated that the prior art and Clayton disclose all limitations of the claims except for a mechanism for altering the wavelength of the light reflected. The Examiner then looks to Boucart as teaching a mechanism for altering the

wavelength of light that is reflected. The Examiner specifically points to the embodiment shown in Fig. 19 of Boucart and the passage at column 10, lines 18-19.

Applicant must disagree with the Examiner's reading of Boucart. The cited passage refers to an embodiment in which the resonant wavelength of the cavity is altered by moving the optical fiber having the grating therein. Such an arrangement does not alter the wavelength of light reflected by the grating-implemented mirror. The Examiner has not pointed to any teaching with respect to altering the spacing in the grating so as to change the wavelength of light reflected by the grating. Accordingly, the Examiner has not made a *prima facia* case for obviousness with respect to Claims 5 or the claims dependent therefrom, and hence, there are additional grounds for allowing these claims.

I hereby certify that this paper is being sent by FAX to 703-872-9306.

Respectfully Submitted,



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